IN THE CLAIMS:

Claim 1 (original): A piezoelectric oscillator having a structure obtained by connecting an amplifier, an external frequency adjustment circuit, and a piezoelectric element in series, wherein

the external frequency adjustment circuit is a variable capacitance circuit using a MOS capacitance element and voltage, and has a configuration for supplying a reference signal having a constant voltage value to a back gate electrode of the MOS capacitance element and supplying a control signal around the reference signal to a gate electrode of the MOS capacitance element,

the MOS capacitance element is a channel transistor of a second conductivity type formed in a well region of a first conductivity type, the second conductivity type being opposite to the first conductivity type, and

a bias voltage is supplied between an extraction electrode of the second conductivity type formed in source and drain regions of the channel transistor of the second conductivity type and an extraction electrode of the first conductivity type formed in the well region of the first conductivity type.

Claim 2 (original): A piezoelectric oscillator having a structure obtained by connecting an amplifier, a temperature compensation circuit, and a piezoelectric element in series, wherein

the temperature compensation circuit is a variable capacitance circuit using a MOS capacitance element and voltage, and has a configuration for supplying a reference signal having a constant voltage value to a back gate electrode of the MOS capacitance element and supplying a control signal for compensation around the reference signal to a gate electrode of the MOS capacitance element,

the MOS capacitance element is a channel transistor of a second conductivity type formed in a well region of a first conductivity type, the second conductivity type being opposite to the first conductivity type, and

a bias voltage is supplied between an extraction electrode of the second conductivity type formed in source and drain regions of the channel transistor of the second

conductivity type and an extraction electrode of the first conductivity type formed in the well region of the first conductivity type.

Claim 3 (original): A piezoelectric oscillator having a structure obtained by connecting an amplifier, a temperature compensation circuit, and a piezoelectric element in series, wherein

the temperature compensation circuit is a variable capacitance circuit using two MOS capacitance elements connected in series and voltage, and has a structure obtained by connecting a parallel circuit composed of a first MOS capacitance element and a first fixed capacitance element in series with a serial circuit composed of a second MOS capacitance element and a second fixed capacitance element so as to connect a back gate electrode of the first MOS capacitance element to a gate electrode of the second MOS capacitance element,

the temperature compensation circuit has a configuration for supplying a reference signal having a constant voltage value to a node between the back gate electrode of the first MOS capacitance element and the gate electrode of the second MOS capacitance element, supplying a first control signal to a gate electrode of the first MOS capacitance element, and supplying a second control signal to a back gate electrode of the second MOS capacitance element,

both the first and second MOS capacitance elements are channel transistors of a second conductivity type formed in a well region of a first conductivity type, the second conductivity type being opposite to the first conductivity type, and

a bias voltage is supplied between an extraction electrode of the second conductivity type formed in source and drain regions of the channel transistor of the second conductivity type and an extraction electrode of the first conductivity type formed in the well region of the first conductivity type.

Claim 4 (original): A piezoelectric oscillator having a structure obtained by connecting an amplifier, a temperature compensation circuit, and a piezoelectric element in series, wherein

the temperature compensation circuit is a variable capacitance circuit using first and second MOS capacitance elements connected in parallel and voltage, and has a

structure obtained by connecting a serial circuit composed of the second MOS capacitance element and a fixed capacitance element in parallel with the first MOS capacitance element so as to connect a gate electrode of the second MOS capacitance element to a back gate electrode of the first MOS capacitance element,

the temperature compensation circuit has a configuration for supplying a reference signal having a constant voltage value to a node between the gate electrode of the second MOS capacitance element and the back gate electrode of the first MOS capacitance element, supplying a second control signal to a back gate electrode of the second MOS capacitance element, and supplying a first control signal to a gate electrode of the first MOS capacitance element,

both the first and second MOS capacitance elements are channel transistors of a second conductivity type formed in a well region of a first conductivity type, the second conductivity type being opposite to the first conductivity type, and

a bias voltage is supplied between an extraction electrode of the second conductivity type formed in source and drain regions of the channel transistor of the second conductivity type and an extraction electrode of the first conductivity type formed in the well region of the first conductivity type.

Claim 5 (original): The piezoelectric oscillator according to any one of claims 1 to 4, wherein all connection senses of the gate electrodes and the back gate electrodes of the respective MOS capacitance elements are inverted.

Claim 6 (currently amended): The piezoelectric oscillator according to any one of claims 1 to 4 [[5]], wherein the first conductivity type is N-type, and the second conductivity type is P-type.

Claim 7 (currently amended): The piezoelectric oscillator according to any one of claims 1 to 4 [[5]], wherein the first conductivity type is P-type, and the second conductivity type is N-type.

Claim 8 (new): The piezoelectric oscillator according to claim 5, wherein the first conductivity type is N-type, and the second conductivity type is P-type.

Claim 9 (new): The piezoelectric oscillator according to claim 5, wherein the first conductivity type is P-type, and the second conductivity type is N-type.